



United States  
Department of  
Agriculture

Forest  
Service

Ashley National Forest

Supervisor's Office  
355 North Vernal Avenue  
Vernal, UT 84078

File Code: 1950

Date: August 23, 2002

Dear Friend of the Ashley:

The enclosed EA documents the analysis of a proposal by the Upper Country Water District for the development of a natural spring located on the Roosevelt/Duchesne Ranger District. Construction of a connection to an existing water delivery system about 50 feet from the spring was also proposed and analyzed. The purpose of the proposed development is to increase the Upper Country Water District's Equivalent Residential Connections. The development would be for culinary water uses.

We welcome your comments on this proposal and the alternatives considered in the EA. Comments on the proposed action and alternatives must be postmarked or sent by fax or e-mail within 30 days from publication of legal notice (expected August 28<sup>th</sup> 2002 in the Vernal Express). Please send your comments to Chaunce Todd, Lands/Mineral Forester at 355 N Vernal Avenue, Vernal UT 84078, or fax to 435-781-5142 or e-mail [ctodd@fs.fed.us](mailto:ctodd@fs.fed.us). Please note that all comments received become part of the public record and are available to others upon request.

If you have any questions about the EA, please contact Chaunce Todd, Lands/Mineral Forester at (435)781-5114 or by e-mail at [ctodd@fs.fed.us](mailto:ctodd@fs.fed.us).

Thank you for your interest in the management of the Ashley National Forest!

Sincerely,

*Theresa West*  
for BERT KULESZA  
Forest Supervisor

cc: Joe Bistryski/District Ranger

ENCLOSURE



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ENVIRONMENTAL ASSESSMENT  
DUCHESNE COUNTY  
UPPER COUNTRY WATER IMPROVEMENT DISTRICT  
CULINARY WATER PROJECT

## INTRODUCTION

In accordance with the national Environmental Policy Act of 1969 (NEPA), and the National Forest Management Act (NFMA) of 1976, Ashley National Forest, Roosevelt Ranger District has supervised the preparation of this environmental assessment (EA) in response to the filing of an application for a Special Use Permit by Duchesne County Upper Country Water Improvement District (Upper Country Water District). Upper Country Water District proposes the development of a natural spring located on Forest land for culinary water uses, and the construction of a connection to an existing water delivery system about 50 feet from the spring.

Section I identifies the purpose and need of the proposed project, the scoping procedures that were used in determining the more significant issues and concerns, and the issues and concerns that were identified.

### I. PURPOSE AND NEED FOR THE PROPOSED PROJECT

Currently, Upper Country Water District has the capacity for 638 Equivalent Residential Connections (ERC), of which all have sold. Future growth and development in the district is on hold because of limited flowrate capacity. Growth in the area is projected to be high for the foreseeable future, and an additional 100 ERC's are expected to be needed by the year 2007.

An additional concern regarding the water from two previously developed springs in Cow Canyon was raised by Ted Allen of the State of Utah Department of Environmental Quality in a meeting on February 4, 1993. According to Mr. Allen, because all three Cow Canyon Springs draw water from the same source, and because of the proximity of the third spring to the lower of the two developed springs, a serious risk of cross-contamination exists. Contaminants, including fecal material from livestock, are present in the surface outflow of spring #3, and have the potential of entering the water flow from the lower of the two developed springs through underground channels. This presents a threat to the existing water system in Cow Canyon. The existing spring development may be in violation of State of Utah guidelines for the protection of culinary water sources, although no determination if this is actually the case has been made (Utah State Department of Natural Resources, personal communication, Nov. 2001).

After consideration of many different sources of additional water for the system, Upper

Country Water District narrowed the options down to three alternatives: pumping water uphill from Starvation Reservoir; constructing a water treatment plant on the Lake Fork River; or developing the remaining natural spring in the Yellowstone drainage of the Uinta Mountains and connecting to the existing delivery system (see Figure 2). After further investigation, the third alternative, Alternative C in this assessment, was identified as the most reasonable. Because lands of the Ashley National Forest would be affected by Alternative C, an application for a Special Use Permit was submitted to the Forest Supervisor, Ashley National Forest.

Although the first two alternatives considered could alleviate the water shortage problem, only the third alternative would help protect the existing water source from cross-contamination.

The decision to be made by the Forest Supervisor is whether or not to issue a Special Use Permit. In order to make this determination, an analysis of all alternatives, both off and on the Forest, was completed.

Alternative A and B are located off the Forest, and therefore do not fall within the Supervisor's authority. These two alternatives are included because they are feasible alternatives, even though they do not involve Forest land.

## BACKGROUND INFORMATION

Upper Country Water District was formed in 1990 in response to water supply problems which began affecting the area after three consecutive years of below-normal precipitation in the entire Uinta Basin (see Table 1). As shown in Figure 1, District boundaries include the communities of Altamont, Altonah, Bluebell, Boneta, Mountain Home, Mt. Emmons, and Talmage, with a total population of approximately 500 families, or approximately 2,000 individuals.

Of the above communities, only Altamont has an existing municipal water system. Residents of other towns depend on individual water wells for culinary water. Approximately one-half of all area residents have experienced problems with wells not recharging or drying up completely.

The water source for the Altamont water system consists of five shallow (less than 100 feet deep) wells along with two springs adjacent to the proposed project area. During part of the spring season in 1991, Altamont's water system had to be shut off at 6 p.m. each evening to let the wells recharge, leaving residents with no water. The town drilled four deep wells, with almost no yield. One appeared to be of good yield, but subsequently dried up. Water deeper than these four wells has been found to be saline. About 55 wells, or 10 percent of the wells in the area, have completely dried up, and many others have declined in production (1992 Cow Canyon Springs Environmental

Assessment (1992 EA)). Some wells are producing on water in the months of January and February. The median income in the area is approximately \$23,500 per family, which makes drilling of deep wells, at a cost of \$5,000-\$10,000, an economic hardship, and with no guarantee as to flows. Some area residents are hauling water over eighteen miles from the town of Duchesne to their homes (1992 EA).

The development of two Springs in the Cow Canyon area in 1992 temporarily alleviated the critical water shortages, but subsequent growth in the area has resulted in the commitment of all of the available water from these sources. Development of the third Cow Canyon spring would provide the additional water needed for projected growth into the foreseeable future (UCWID, personal communication, March 2002).

### ISSUES AND CONCERNS IDENTIFIED

Public involvement and comments about this project were solicited with an advertisement in the Uintah Basin Standard on February 10, 1998. In addition, scoping letters were sent to interested parties, including those who commented on the previous Cow Canyon Spring development in 1992. Several letters were received in response. Most of the comments raised issues which were identified in the previous spring development, and addressed in the 1992 Cow Canyon Springs Environmental Assessment. One additional concern, regarding the affect of the project on the existing pond at the third spring, was raised.

During the scoping process for both the current proposed development, and the 1992 spring development, the following issues were raised about this project that were then analyzed and addressed in this environmental assessment:

1. How would modifications in the stream flow regimen of the affected rivers impact the trout fisheries?
2. What would be the effects of the project on Threatened, Endangered, or Sensitive species or critical habitat which may be present in the project area?
3. Would there be a net depletion of flow in the Green or Colorado Rivers or modifications that may affect the downstream fisheries habitat?
4. What would be the effects of water withdrawals on the existing water supply?
5. Would big game migration routes be impacted by the project?
6. What is the impact of the alternatives on existing inventoried Roadless Areas?
7. What would be the effects of water withdrawal on existing wetlands?
8. What affect on temperature regimes in the affected rivers would occur as

a result of water diversion?

9. What would be the impact on the aquatic system of the pond at the spring?

The purpose of this environmental assessment is to disclose the effects on the environment of the alternatives.

## II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

### ALTERNATIVES WHICH WERE INITIALLY CONSIDERED, BUT ELIMINATED FROM FURTHER STUDY

At least seven different alternatives were initially considered to provide a source of additional culinary water for the area. Several proposals were considered during the planning for the initial spring development in 1992, but eliminated from detailed analysis and inclusion after initial consideration. These alternatives are still available, and worth mentioning here. These are as follows:

1. Pumping groundwater  
This alternative was not considered feasible because a reliable supply of groundwater has not been identified in the area.
2. Drilling a well along the Yellowstone River  
This alternative was rejected because of the high cost of drilling a well with no guarantee as to water flow, and because no other wells of such a magnitude have been known to be developed in the area.
3. Developing the Yellowstone Spring (located on Yellowstone Ranch property). This alternative was eliminated from further study because of low flows. This spring flows less than thirty gallons per minute in the fall and winter months.
4. Developing other springs—Several other springs in the area were considered, but rejected. Rock Creek Spring in Miner's Gulch was looked at; however, the water was already claimed by the Central Utah Project. Water from this source is used by CUP to maintain federally mandated minimum stream flows on Rock Creek. In the event that this water was not needed for this purpose, it would be diverted into Starvation Reservoir for other CUP uses (letter from CUP, 04/11/02). Little Water Spring and other springs in Harmston Basin and Hell's Canyon were looked at. All were rejected because of low flows (1992 EA). Crystal Ranch Spring was rejected because of its low elevation, which would require pumping, and because of low flows (1992 EA).

## ALTERNATIVES WHICH WERE CONSIDERED IN DETAIL

The following criteria were used to develop feasible alternatives from all of the available options: water quality; water quantity; dependability of water supply; water rights availability; project cost and project feasibility.

Three alternative actions were determined to be feasible and were examined in detail. These alternatives include: Alternative A, Starvation Reservoir Pumping; Alternative B, Lake Fork River Water Treatment Plant; and Alternative C, Development of the Third Spring in Cow Canyon (Proposed Action). No Action (maintain status quo) is discussed as Alternative D. Alternative A and B do not involve Forest land; Alternative C is located on Forest land.

No segment of the population, including minorities, women, the handicapped, elderly, or low income, would be disproportionately impacted by implementation of any of the alternatives.

According to Mr. Ferris P. Allgood, State Soil Scientist for the U.S. Soil Conservation Service, there would be no impacts to prime, unique, statewide or locally important farmlands if any of the "build" alternatives were implemented (see the original Environmental Assessment for the Cow Canyon Springs Development).

### ALTERNATIVE A: STARVATION RESERVOIR PUMPING

This alternative would involve construction of twenty four miles of eight and ten inch pipe from the existing Duchesne Valley Water Treatment Plant (DVWTP) to the communities of the Upper Country Water District. Water would have to be pumped uphill from an elevation of 5,811 feet at the water treatment plant to the service area, which is around 7,250 feet at its highest point. The water source would be Starvation Reservoir. Construction of twelve pumping stations would be required. Five reservoirs would be constructed on private lands.

No National Forest land would be affected under this alternative.

One possible problem in using the existing DVWTP is the fact that there is no backup for the water intake pump at the plant. In case of breakdown and repair, residents of Upper Country Water District could be without water for up to two weeks. Also, with up to twelve pump stations required to move the water uphill, the possibility of mechanical failure increases. An additional factor considered was the cost of acquiring, treating and pumping water 1,440 vertical feet, expected to be \$70,000 per year.

Under this alternative, an eight inch diameter mainline would connect to the existing 18-inch DVWTP pipeline north of the city of Duchesne and then parallel Highway 87 north approximately 7.5 miles. The pipeline would then leave the road right-of-way heading toward Boneta, and would follow Highway 87 right-of-way toward Altamont and Bluebell. The distribution system would be the same for all three alternatives. If this alternative was implemented, water from Starvation would have to be purchased.

#### ALTERNATIVE B: LAKE FORK RIVER WATER TREATMENT PLANT

This alternative would involve the construction of a new water treatment plant to treat water from the Lake Fork River. The plant would most likely be located two miles south of its confluence with the Yellowstone River, in Section 9, (T1S, R4W, USM). Land for the site would be purchased from private owners. The plant would be located on a two acre site, and would most likely consist of a 40 foot by 40 foot brick-faced structure. A concrete wall would be constructed across the river bed at the plant site to stabilize the water level. A concrete intake structure would be constructed to direct water into the plant.

No National Forest land would be affected under this alternative.

This alternative would be costly from the standpoint that it would involve long-term operation and maintenance costs. A plant operator would have to be hired to oversee water treatment and maintain the facilities. Water would have to be pumped uphill to portions of the service area.

Water would have to be fully treated at the plant according to state standards which includes coagulation, filtering and chlorination. After treatment, water would be pumped into the system for distribution. If this alternative were constructed, water rights would have to be purchased from existing shareholders.

#### ALTERNATIVE C: DEVELOPMENT OF THE THIRD SPRING AT COW CANYON (PROPOSED ACTION)

This alternative would involve the development of the remaining natural spring located in an area within Yellowstone Canyon known as Cow Canyon (Section 15, T2N, R4W, USM) in Ashley National Forest (See Figure 2). The developed spring would be connected to the existing water delivery system about 50 feet from the spring. Construction access would follow the same route used in the 1992 project. The springs are not located in an inventoried roadless area.

The flow of the spring has been measured at about 1.1 cfs (one cubic foot per second is